PATENT
Docket No: ST03005CIP (SIRF.54USCIP1)
Serial No.: 10/700,821

IN THE SPECIFICATION:

Please replace the paragraph on page 5, lines 6-17, which begins with the phrase "Embodiments of the invention allow coarse positioning by a mobile station", with the following rewritten paragraph:

- - Embodiments of the invention allow coarse positioning by a mobile station in [[a]] satellite based positioning systems, such as the GPS system. Embodiments of the invention provide traditional GPS accuracies while dramatically reducing the bandwidth consumed by similar methods and their required assistance data payloads. Embodiments of coarse location positioning described herein require a minimum amount of transmitted assistance data. While some MS-assisted techniques rely on acquisition aiding information with a usable lifespan measured in minutes, or on ephemeris data with a lifespan measured in hours, coarse location positioning methods described herein use satellite sub-almanacs that remain usable for many weeks. An almanac is a list of Kepler parameters, e.g., orbit and clock parameters, for all of the satellites operating in the GPS constellation. A sub-almanac contains only the orbit and clock parameters for one satellite. - -

Please replace the paragraph on page 7, lines 16-18, which begins with the phrase "The MS 140 includes a GPS receiver 141", with the following rewritten paragraph:

- - The MS 140 includes a GPS receiver 141, a CPU 142, a memory device 143 and a wireless transceiver [[44]] 144. The MS 140 has sub-almanac data stored in the memory 143, although the data may not be a complete almanac. - -

Please replace the paragraph on page 8, lines 3-13, which begins with the phrase "Embodiments of the invention reduce the time to first fix (TTFF)", with the following rewritten paragraph:

- - Embodiments of the invention reduce the time to first fix (TTFF) for a GPS mobile station receiver while using minimal power, in part by using GPS sub-almanac data stored on, or sent to, the mobile station to calculate its own coarse position. **Figure 2** is a flow diagram illustrating a general method according to one embodiment. At 200, a coarse positioning session is initiated. The coarse positioning session can be initiated by the MS itself, or the MS may receive a signal initiating the session, such as a positioning request sent or forwarded by the position server or BS. Optionally, the network also transmits a reference position that includes latitude, longitude, and time. The reference position is a precise position of a location that is close enough to the mobile station to be helpful to the mobile station [[in]] as an indication of which satellites should be in view and in finding an initial position solution. - -

Please replace the paragraph beginning on page 8, line 14, and ending on page 9, line 2, which begins with the phrase "At 202, the MS uses stored sub-almanac data", with the following rewritten paragraph:

- - At 202, the MS uses stored sub-almanac data along with a reference position (if received) and time estimates, to acquire satellites and take measurements. Taking measurements includes, for example, determining [[a]] an approximate distance of the mobile station from a particular satellite with some error attributable to time differences. The MS, at 204, uses the measurements, and a satellite position as derived from the sub-almanacs, to calculate a coarse

position. At 206, the MS transmits the coarse position to the network along with a list that identifies the particular satellites used in the solution, and the particular sub-almanacs used for each satellite. In some embodiments, the MS transmits a full coarse position. In other embodiments, the MS transmits a position difference between the reference position received from the network, and the coarse position. - -